

عنوان مقاله:

Investigation of the Effect of Creatine Monohydrate Supplementation on Muscle Damage in Male Climbers following Climbing to an Altitude of 4000 Meter

محل انتشار:

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خلاصه مقاله:

Purpose: Creatine is the most important and commonly used supplement in athletes. The purpose of this study was to investigate the simultaneous effect of moderate altitude and short-term Creatine supplementation on musculoskeletal damage indicators in male climbers. **Method:** 16 male hikers with at least 2 years of hiking experience selected. Subjects (age 30.6 ± 6.3 yrs.), (height 178.3 ± 6.4 cm), (weight 77.6 ± 11.25 kg) were randomly divided into experimental (Creatine supplement) and control groups (placebo). The experimental group consumed 20 gr/day of the supplement for 5 days, while the control group received a placebo. The first blood samples were taken before the hiking session at the location of program. Hiking program consisted of ascending to Tochal peak at an altitude of 3961m. The second blood samples were taken after returning from the peak at an altitude of 3750 meters. The results were analyzed by SPSS software using independent t-test and K-S test with a significant coefficient of 0.05. **Results:** The results showed that there was a significant difference between LDH and AST enzyme levels in post-test compared to pre-test in both AST ($P = 0.03$) and ALT ($P = 0.001$) levels Control group. Also, climbing to 4000 m altitude with Creatine supplementation had no significant effect on LDH ($P = 0.78$) and AST ($P = 0.86$) levels between groups. **Conclusions:** The results showed that changes in muscle damage enzymes are independent of Creatine supplementation.

کلمات کلیدی:

Altitude, Aspartate Aminotransferase, Alanine Aminotransferase

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